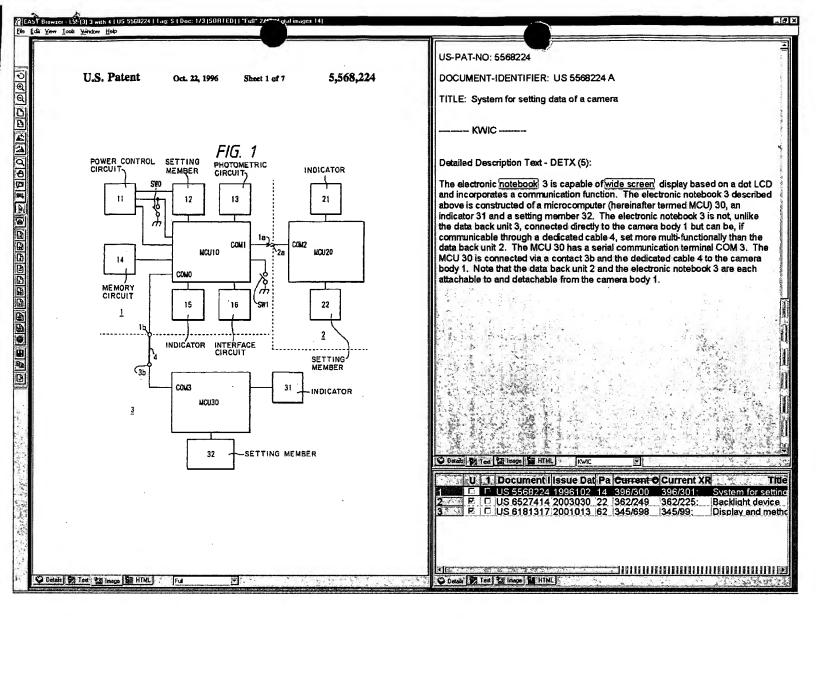
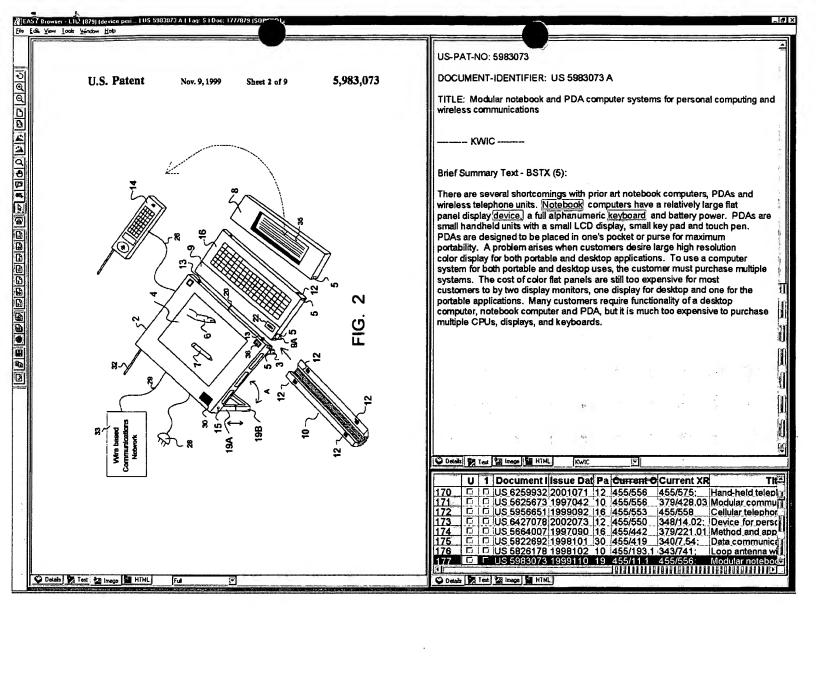


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US 6,219,227 B1

the user is transporting or storing the portable computer assembly 10. As illustrated in FIG. 5, the outer casing 34 includes an access cover 38, the PCBA components 22 including, but not limited to the processing system, for controlling the operation of the portable computer assembly 10, and a PCBA shield 40 for electronically shielding the processing system and other PCBA components from the heat magnetic, and/or electrical interference generated by the operation of the various computer hardware components. Each of the above-identified elements of the portable computer assembly 10 within the outer casing 34 will now be puter essembly 10 within the outer casing 34 will now be described in further detail.

computer assembly 10. An external pointing device (not shown) can also be connected to the portable computer session of the receiving opening 46 for receiving through a support the post-special pointing the post-special pointing device 42, e.g., a mouse, a touch pad, a trackfull, a joystick, etc., can be positioned adjacent the keyboard 24 which can fit within the portable computer assembly 10. Furthermore, a completally functional pointing device 42, e.g., a mouse, a touch pad, a trackfull, a joystick, etc., can be positioned adjacent the keyboard 24 to augment the user's ability to use the portable computer assembly 10. An external pointing device (not shown) can also be connected to the portable computer assembly 10 through an appropriate connection 44 to the portable computer system 10.

The access cover 38 further includes a cellular telephone receiving opening 46 for receiving the cellular telephone receiving opening 46 for receiving the cellular telephone receiving opening 46 for receiving the cellular telephone 16 in a snap-fit type or the like manner. The cellular telephone receiving opening 46 for receiving the cellular telephone receiving opening 46 for receiving the cellular telephone receiving opening 46 for the cellular telephone to the cellular telephone receiving opening 46 for the shape of the cellular telephone receiving opening 46 for the cellular telephone to the cellular telephone receiving opening 46 for the cellular telephone to the cellular telephone receiving opening 46 for the cellular telephone to a battery pack \$2 (as illustrated in FiG. 5) the recharged during non-use of the cellu The removable access cover 38 includes the keyboard 24

(3)

be recharged during non-use of the cellular telephone 16 thereby insuring sufficient power for the cellular telephone 16 when used by the user of the portable computer system 10. Additionally, the contacts 54 allow the cellular telephone 16 to be powered by the power source of the computer system 12 when the cellular telephone 16 is used by the user. system 12 when the cellular telephone 16 is used by the tuer. It is sould be noted that the cellular telephone 16 is preferably a powered by a battery pack within the cellular telephone except when the cellular telephone battery pack has low power then the computer system power source or external power source powers the cellular telephone 16. Furthermore, the contacts \$4\$ connect the aments \$9\$ of the cellular telephone 16 with the computer system antenna 60 and connects the signals processed by the cellular telephone 16 to the computer system 12, as will be described in further.

SHEDDING THE CONTROL OF THE CONTROL

the cellular telephone 16 is received within the cellular telephone receiving opening 46. The antenna connection 56 includes a protrusion 58 for releasably contacting the cellular telephone amenna 50 of the cellular telephone 16 and Inlar telephone amenna \$0 of the cellular telephone 16 and assisting in releasably maintaining the cellular telephone 16 in the cellular telephone 16 in the cellular telephone receiving opening 46. Furthermore, the antenna connection 56 connects to a computer system antenna 60 (as illustrated in FIG. 4) either attached to or molded into the closable til 36 for providing a better signal between the cellular telephone 16 and a local cellular telephone tower (not shown) or satellite (not shown). The computer system antenna 60 in the closable lid 36 will be discussed in further detail below.

computer system antenna 60 in the closable lid 36 will be discussed in further detail below. Now referring back to FIG. 3, the PCBA components 22 are mounted directly under the access cover 38 nearingly ediacent the keyboard 24 and the pointing device 42. A PCBA shield 40 is then positioned adjacent, under, addor over the PCBA components 22 from heat, magnetic, and electrical interference generated by the various computer hardware components positioned beneath the PCBA shield 40 will shield the components of the portable computer system 10 as necessary, e.g., above, below, or around the PCBA components.

components.

The various computer hardware components include, but are not limited to, the CD ROM-flooppy disk drive 28, the rechargeable battery pack 52, the hard disk drive 26, and at PCMCIA drive 30 for receiving at less one PCMCIA card 32. The PCBA components 22 controls the functions of the portable computer system 10 including, but not limited on, the operation of the keyboard 24, the pointer device 42, the cellular telephone 16, the printer device 18, the paper tray 20, the various computer hardware components, an external printer (not shown), I/O ports (similar to those I/O ports found on computers, and less than 10 ports, under ports, etc., power ice, aerial ports, parallel ports, video ports, etc., power ports found on conventional desktop and laptop computers, i.e., serial ports, parallel ports, video ports, etc., power management, memory management, etc. It should be noted that the arrangement and/or inclusion of certain computer hardware components can be different than illustrated depending on the needs and desires of the manufacturer and/or user.

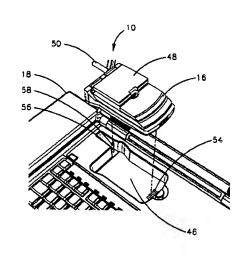
and/or user.

The rechargeable battery pack \$2 of the computer system 12 is preferably, but not necessarily, an extended life battery to power the functions of the computer system 12, the printer device 18, the paper tray 20, the cellular telephone 16, etc., when external power is not available. In a preferred embodiment, the inventor of the present invention envisions the battery pack \$2 baxing a life of approximately three (3) to approximately four (4) hours with mostly computer use and a life of approximately one (1) to approximately two (2) hours with computer use and intermittent printer device use. These approximate time limits are merely estimates of battery pack life and could be increased depending on the size, type, and capacity of the battery pack \$2.

battery pick life and could be increased depending on the size, type, and capacity of the battery pack 52.

The PCBA shield 40 includes a cover hinge 62 for hingedly connecting the PCBA shield 40 to the outer casing 34. A handle 64 ou the PCBA shield 40 about the cover hinge 62 to provide access to the manufacturer to the various computer hardware components positioned within the outer casing 34 under the PCBA shield 40. Additionally, it is within the access of the meanufacture to the various constitution of the pCBA shield 40. Additionally, it is within the access of the meanufacture to meanufacture careful. nancets the signals processed by the cellular telephone 16 the computer system 12, as will be described in further still below.

The cellular telephone receiving opening 46 further set components, i.e., the floopy/CD ROM drive 28, through the side of the cuter casino 34 in order to provide access to the user to the various hardware components.



U.S. Patent

Apr. 17, 2001

Figure 3

